



ABSTRACTS
NVVC Voorjaarscongres 2026
Donderdag 16 april
09.00 – 10.30 uur

SESSIE 4: Coronary heart disease & prevention

	Zaal: Galloway	Voorzitters: dr. Jeroen Jaspers Focks, cardioloog Slingeland drs. Casper Eurlings, cardioloog Laurentius Ziekenhuis Roermond
1	09.00 - 09.10	Development of a Resilience Assessment Tool for Cardiac Care Pathways in Europe: a Mixed-methods Study <i>Niek Klazinga, Amsterdam UMC, Amsterdam</i>
2	09.11 - 09.21	Ticagrelor-Based Dual Antithrombotic Therapy in Anticoagulated Patients Undergoing PCI: A Pooled Analysis of Two Multicenter Registries <i>Qiu Ying van de Pol, St. Antonius Ziekenhuis, Nieuwegein</i>
3	09.22 - 09.32	Infarct-related Myocardial Resistance Before Reperfusion in Patients With Acute Myocardial Infarction to Predict Microvascular Injury and Clinical Outcomes <i>Konrad van Beek, Catharina Ziekenhuis, Eindhoven</i>
4	09.33 - 09.43	Progression of Coronary Artery Calcification in Melanoma Patients Treated with Immune Checkpoint Inhibitors Assessed on Routine Non-gated CT Scans <i>Noura Laachir, LUMC, Leiden</i>
5	09.44 - 09.54	Direct versus Late maxLCBI4mm Changes after Paclitaxel-coated Balloon Treatment of Lipid-rich Plaques <i>Tamara Dijkstra, Amsterdam UMC, Amsterdam</i>
6	09.55 - 10.05	Direct Mobilization after Successful Femoral Deployment of an Angio-Seal VIP Post Coronary Angiography or Percutaneous Coronary Intervention: Results of the Move-it Pilot Study <i>Rosa-Lia Jonkman, Amsterdam UMC, Amsterdam</i>
7	10.06 - 10.16	Association between Socioeconomic Status and Cardiovascular Outcomes after PCI <i>Sanne Janssen, Zuyderland Medical Centre, Heerlen</i>
8	10.17 - 10.27	Current Adoption of ESC Guidelines for Intracoronary Imaging in Complex Percutaneous Coronary Interventions in the Netherlands <i>Femke Bosman, Catharina Ziekenhuis, Eindhoven</i>



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Abstract 1

Development of a Resilience Assessment Tool for Cardiac Care Pathways in Europe: a Mixed-methods Study

Presenting author: N.S. Klazinga

Department: Public and Occupational Health

A.S.V. Carvalho (Amsterdam UMC, Amsterdam); A.S.V. Carvalho (Amsterdam UMC, Amsterdam); Ó.B. Fernandes (Amsterdam UMC, Amsterdam); J. Piek (Amsterdam UMC, Amsterdam); W. Wijns (The Lambert Institute for Translational Medicine and CURAM, University of Galway, Galway, Ireland); Niek Klazinga (Amsterdam UMC, Amsterdam) Dionne Kringos (Amsterdam UMC, Amsterdam)

Purpose:

Background: The COVID-19 pandemic exposed critical vulnerabilities in cardiac care delivery, highlighting the need for greater resilience in care pathways. Given the gap in practical tools tailored to cardiac care, this study describes the development of a resilience assessment tool for European cardiac care pathways.

Methods:

Methods: Explanatory sequential mixed-methods study: 1) a survey to cardiologists from EU Member States to map disruptions and innovations during the pandemic; 2) five multi stakeholder focus groups with representatives from various EU countries; quantitative data was analysed using descriptive statistics and qualitative data using thematic analysis; 3) the resilience assessment tool was developed through a collaborative multi-stakeholder approach.

Results:

Results: A total of 177 professionals replied to the survey and 40 informants participated in the focus groups. Staff shortages and infrastructure capacity were perceived as the most relevant challenges during the pandemic. The measures most frequently reported to address staff shortages and infrastructure capacity shortages were the reallocation of health staff (75%;n=133) and repurposing infrastructures (38%;n=32), respectively. Seventeen resilience sub-dimensions and related actions were identified. The resulting tool includes four components: (1) mapping of the local cardiac care pathway, (2) stakeholder identification for ABSTRACT | RESIL-Card is a EU-funded project (EU4Health#101129203) collective self-assessment, (3) a preparedness checklist generating a visual heat map, and (4) a resource toolkit with recommended actions and good practices

Conclusion:

Conclusion: The resilience assessment tool offers step-by-step guidance to strengthening cardiac care pathways across six key resilience dimensions, supported by actionable recommendations. By enabling users to identify context-specific vulnerabilities and improvement priorities, the tool supports healthcare professionals and policy-makers in advancing preparedness and cardiac care continuity before, during, and after crises. Its implementation is being piloted in European hospitals to assess usability and refine its practical value

Keywords:

resilience assessment tool, cardiac pathways



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Abstract 2

Ticagrelor-Based Dual Antithrombotic Therapy in Anticoagulated Patients Undergoing PCI: A Pooled Analysis of Two Multicenter Registries

Presenting author: Q.Y.F. van de Pol
Department: Cardiology

A. Verburg (St. Antonius Ziekenhuis, Nieuwegein); Q.Y.F. van de Pol (St. Antonius Ziekenhuis, Nieuwegein); A. Verburg (St. Antonius Ziekenhuis, Nieuwegein, Cardiovascular Research Institute Maastricht, Maastricht); Q.Y.F. van de Pol (St. Antonius Ziekenhuis, Nieuwegein); S. Gasle (St. Antonius Ziekenhuis, Nieuwegein); W.W.A. van den Broek (St. Antonius Ziekenhuis, Nieuwegein); J. Azzahafi (St. Antonius Ziekenhuis, Nieuwegein); D.R.P.P. Chan Pin Yin (St. Antonius Ziekenhuis, Nieuwegein); W.L. Bor (St. Antonius Ziekenhuis, Nieuwegein); J.M. ten Berg (St. Antonius Ziekenhuis, Nieuwegein, Cardiovascular Research Institute Maastricht, Maastricht)

Purpose:

Dual antithrombotic therapy (DAT) after short-term triple antithrombotic therapy (TAT) is recommended in patients requiring chronic oral anticoagulation after percutaneous coronary intervention (PCI). Clopidogrel is the preferred P2Y₁₂ inhibitor to reduce bleeding risk, but its pharmacodynamic limitations raise concerns about ischemic protection. This analysis explored the clinical consequences of intensifying platelet inhibition with ticagrelor as part of DAT in anticoagulated patients undergoing PCI.

Methods:

Data were pooled from two prospective multicenter registries including anticoagulated patients undergoing PCI. Patients were classified by discharge medication: ticagrelor-based DAT, clopidogrel-based DAT, or clopidogrel-based TAT. The co-primary endpoints were a composite of all-cause mortality, myocardial infarction, definite stent thrombosis (ST), ischemic stroke or transient ischemic attack (MACCE) and clinically relevant or major bleeding (BARC 2, 3 or 5) at one year. Propensity score matching was used to adjust for baseline differences.

Results:

Among 1713 patients, 5.8% received ticagrelor-based DAT, 61.5% clopidogrel-based DAT, and 32.7% TAT. Ticagrelor-based DAT had similar MACCE rates (11% vs 12.5%), though higher observed rates of definite ST compared to clopidogrel-based DAT which remained significant after matching (4.6% vs 0.4%, p=0.028). MACCE rates were similar in ticagrelor-based DAT and TAT (11.0% vs 10.4%) which sustained after matching. Bleeding rates did not differ significantly between the two DAT strategies (15% vs 14.3%), but bleeding occurred less frequently with ticagrelor-based DAT than with clopidogrel-based TAT (15% vs 21.4%).

Conclusion:

Intensification of platelet inhibition with ticagrelor was not associated with improved ischemic outcomes while bleeding rates were comparable to clopidogrel-based DAT and lower than with TAT.

Keywords:

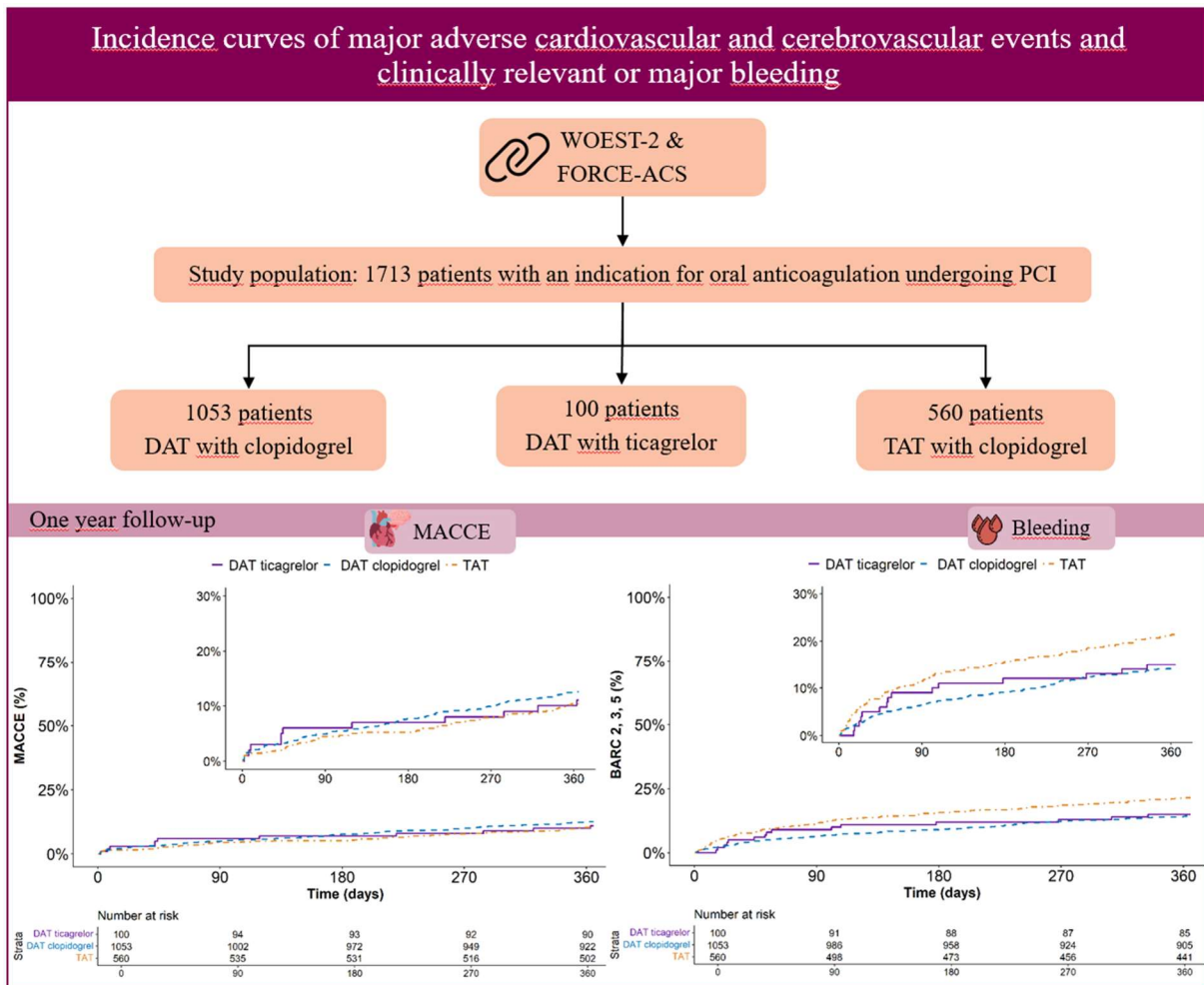
Percutaneous Coronary Intervention, Oral Anticoagulation, P2Y₁₂ inhibitor



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Figure:

Figure 1. Central Illustration: Clinical outcomes of DAT with ticagrelor compared to DAT with clopidogrel and clopidogrel-based TAT. This analyses was performed using pooled data from two prospective multicenter registries including anticoagulated patients undergoing PCI. The What is the Optimal antiplatElet and anticoagulant therapy in patients with oral anticoagulation undergoing revasculariSation 2 (WOEST-2) registry and The Future Optimal Research and Care Evaluation: On the Way to 'Personalized Medicine' with an Ongoing Registry of Patients with Acute Coronary Syndrome in Daily Clinical Practice (FORCE-ACS) registry. Patients were classified by discharge medication. The co-primary endpoints were a composite of all-cause mortality, myocardial infarction, definite stent thrombosis, ischemic stroke or transient ischemic attack (MACCE) and clinically relevant or major bleeding (BARC 2, 3 or 5) at one year follow-up.





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Abstract 3

Infarct-related Myocardial Resistance Before Reperfusion in Patients With Acute Myocardial Infarction to Predict Microvascular Injury and Clinical Outcomes

Presenting author: K.A.J. van Beek

Department: Cardiologie

K.A.J. van Beek (Catharina Ziekenhuis, Eindhoven); S. Khan; H. Butt; J.P.A. Demandt; R. Eerdeken; D.M.M. Dillen; T.R. Keeble; R. Good; C. Berry; T. Engström; J.M. Madse; K.G. Oldroyd; B. Beleslin; B. de Bruyne; S. Corradetti; O. Fröbert; K. Mangion; K. Teeuwen; M. van 't Veer; N.H.J. Pijls; P.A.L. Tonino; L.C. Otterspoor; M. El Farissi

Purpose:

Microvascular injury (MVI) increases the risk of heart failure and mortality in patients with ST-elevation myocardial infarction (STEMI). Therefore, it is important to detect these patients at an early stage for additional (experimental) therapies to improve outcomes. Currently, there are no methods to diagnose MVI in STEMI patients before reperfusion. The objective of this study was to assess the invasively measured infarct-related absolute myocardial resistance (Rinfarction) to predict MVI before reperfusion. Cardiac magnetic resonance imaging (CMR) characterises MVI, in the forms of microvascular obstruction (MVO) and intramyocardial hemorrhage (IMH) with IMH being at the 'extreme' end of the injury spectrum.

Methods:

In this substudy of the EURO-ICE trial, Rinfarction was calculated as the change in distal coronary pressure during saline infusion in the occluded culprit artery, divided by the flow rate of the infused saline. The primary endpoint was to assess the diagnostic performance of Rinfarction to predict MVO on CMR performed at 2–7 days. The secondary endpoint was a composite of all-cause mortality or hospitalisation for heart failure up to 5 years.

Results:

A total of 82 patients were included. The area under the Receiver-Operating Characteristic curve of Rinfarction to predict MVO and IMH was 0.84 and 0.78, respectively. The optimal cut-off value for both MVO and IMH was 1000 Wood units (WU). The composite endpoint of all-cause mortality or hospitalisation for heart failure occurred in 15.6% and 2.3% in the Rinfarction ≥ 1000 WU and Rinfarction < 1000 WU groups, respectively ($p=0.06$).

Conclusion:

Rinfarction is able to predict MVI in STEMI before reperfusion and may serve as a tool in future trials to select patients that might benefit most from experimental therapies.

Keywords:

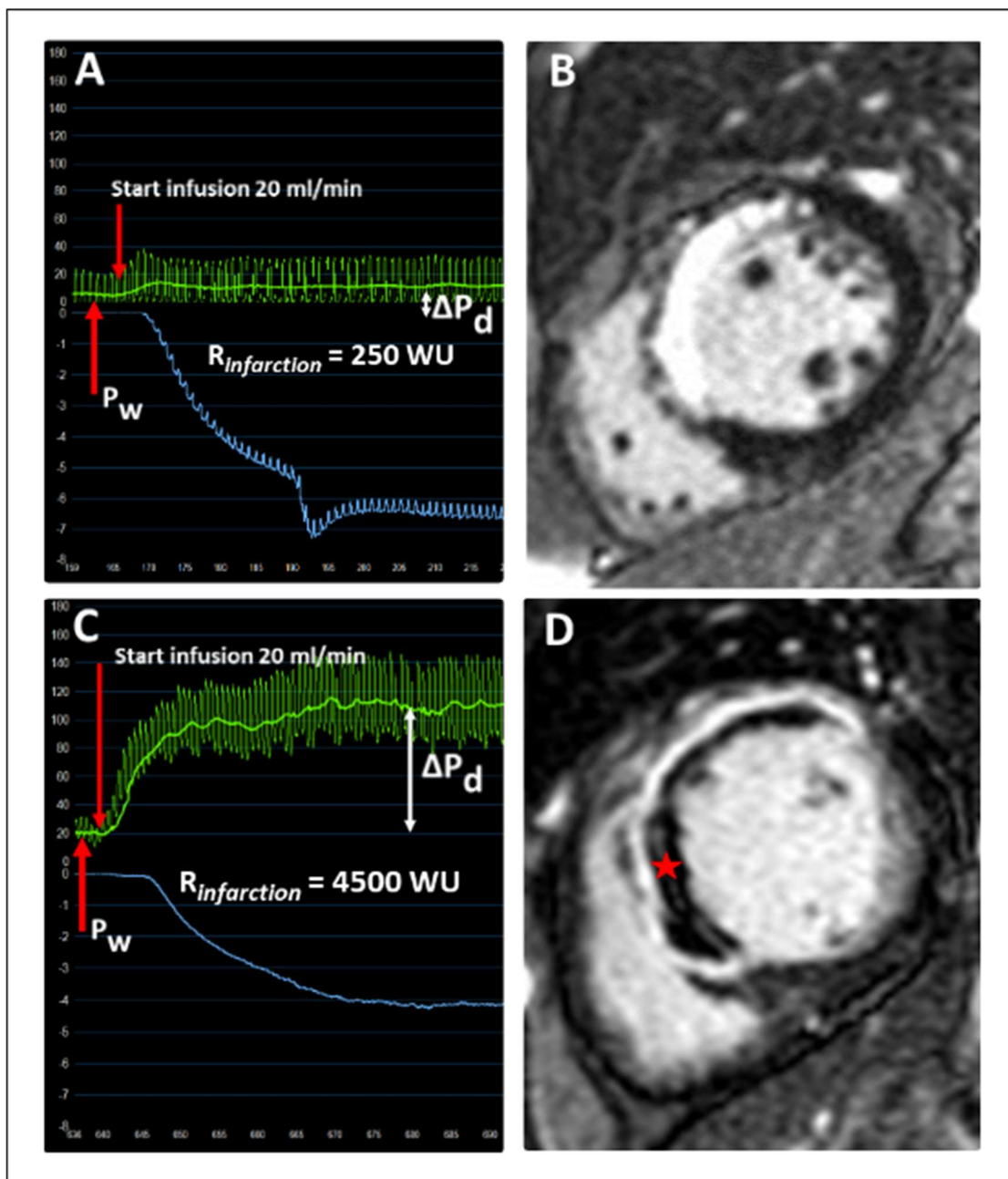
Acute myocardial infarction, Coronary physiology, Microvascular injury



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Figure:

Pressure (green) and temperature (blue) tracings of two different patients with corresponding cardiac magnetic resonance imaging studies (CMR). Panel A shows a minimal change in distal coronary pressure (ΔP_d) relative to the coronary wedge pressure (P_w) during saline infusion at a rate of 20 mL/min. The infarct-related myocardial resistance ($R_{\text{infarction}}$) in this patient was 250 Wood units. Microvascular injury was not observed in this patient (Panel B). The distal coronary pressure in Panel C, from a different patient, shows a remarkable increase during saline infusion at a rate of 20 ml/min. The $R_{\text{infarction}}$ was 4500 Wood units and the CMR study of this patient revealed extensive microvascular injury with signs of both microvascular obstruction and intramyocardial hemorrhage (Panel D, red asterisk).





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Abstract 4

Progression of Coronary Artery Calcification in Melanoma Patients Treated with Immune Checkpoint Inhibitors Assessed on Routine Non-gated CT Scans

Presenting author: N. Laachir

Department: Hartziekten

N. Laachir (LUMC, Leiden); N. Laachir (LUMC, Leiden); E. Kapiteijn (LUMC, Leiden); J.W. Jukema (LUMC, Leiden); M.L. Antoni (LUMC, Leiden)

Purpose:

To evaluate longitudinal changes in coronary artery calcification (CAC) as a marker of atherosclerosis in melanoma patients treated with immune checkpoint inhibitors (ICIs).

Methods:

This retrospective cohort study included patients with stage III–IV melanoma treated with ICIs between 2012 and 2024 who underwent serial CT imaging during follow-up. CAC was assessed at baseline and at 1- and 2-year follow-up using a visual ordinal scoring system on routine non-gated CT scans. Changes in CAC over time were analyzed using paired Wilcoxon signed-rank tests and mixed-effects models.

Results:

95 patients were included; 93 and 62 underwent CT imaging at 1- and 2-year follow-up, respectively. At baseline, 53.7% of patients had coronary calcifications. This proportion increased to 60.9% at 1 year and 62.9% at 2 years. CAC scores increased significantly at both follow-up time points (both $p < 0.001$). CAC progression was observed in 27.2% of patients at 1 year and in 45.2% at 2 years. Mixed-effects modeling showed significantly higher odds of increased CAC at 1 year ($\beta = 2.72$, SE 0.58; $p < 0.001$) and 2 years ($\beta = 5.61$, SE 0.91; $p < 0.001$) compared with baseline. At baseline, statin users had significantly higher CAC scores and a higher prevalence of CAC compared with non-users ($p < 0.001$); however, no significant difference in CAC progression was observed between groups.

Conclusion:

Melanoma patients treated with ICIs demonstrate significant progression of CAC during follow-up. Simple visual CAC assessment on routine non-gated CT scans may allow identification and monitoring of atherosclerotic disease progression in this population.

Keywords:

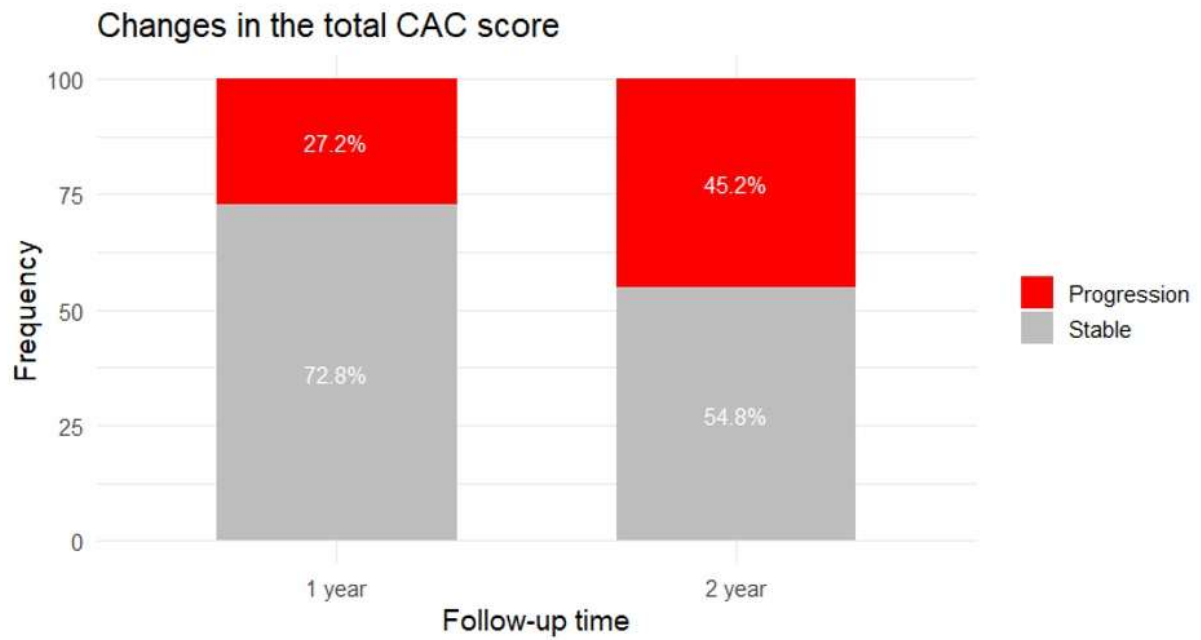
Immune Checkpoint inhibitors, Atherosclerosis, Ordinal score



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Figure:

The percentage of patients demonstrating progression of the ordinal score at 1-year (n=93 patients) and 2-year (n=62 patients) follow-up after the start of ICI compared to the baseline ordinal score





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Abstract 5

Direct versus Late maxLCBI4mm Changes after Paclitaxel-coated Balloon Treatment of Lipid-rich Plaques

Presenting author: T.N. Dijkstra

Department: Cardiology

T.N. Dijkstra (Amsterdam UMC, Amsterdam); A. van Veelen (Amsterdam UMC, Amsterdam); I.T. Kucuk (Amsterdam UMC, Amsterdam); H.M. Garcia-Garcia (Medstar Washington Hospital Centre, Washington DC); R. Delewi (Amsterdam UMC, Amsterdam); M.A.M. Beijk (Amsterdam UMC, Amsterdam); A.W. den Hartog (Amsterdam UMC, Amsterdam); M.J.D. Grundeken (Amsterdam UMC, Amsterdam); M.M. Vis (Amsterdam UMC, Amsterdam); J.P.S. Henriques (Amsterdam UMC, Amsterdam); B.E.P.M. Claessen (Amsterdam UMC, Amsterdam)

Purpose:

Lipid-rich plaques are a frequent cause of adverse cardiovascular events. Paclitaxel-coated balloons (PCB) can be used for focal pre-emptive treatment of lipid-rich plaques (LRPs) in non-culprit coronary lesions. However, the evolution of intracoronary imaging features after PCB-treatment remains inadequately understood. This post-hoc analysis of the DEBuT-LRP study aimed to evaluate direct versus late changes in intracoronary imaging features stratified per treated vessel.

Methods:

In DEBuT-LRP, 20 patients with non-ST-segment elevation acute coronary syndrome underwent PCB treatment of a non-culprit lipid-rich plaque, identified by three-vessel intravascular ultrasound and near-infrared spectroscopy after percutaneous coronary intervention of flow-limiting lesions. PCB inflation was performed under nominal pressure for an inflation duration of at least 60 seconds. LRPs were defined as a maximum lipid-core burden index in a four millimeter segment (maxLCBI4mm) of >325. Intracoronary imaging was repeated immediately post-procedure and at 9-month follow-up. MaxLCBI4mm was analyzed using the Wilcoxon signed-rank test for pairwise changes and Kruskal-Wallis test for inter-vessel differences.

Results:

Complete intracoronary imaging at baseline, directly post-PCB treatment and at 9-month follow-up was available in 14 patients. The median MaxLCBI4mm in treated segments significantly decreased from 461 (IQR 315-536) at baseline to 233 (IQR 124-375) at 9-months ($p < 0.01$), with a significant reduction from directly post-PCB (400 with IQR 286-516) to 9-months ($p = 0.01$). No significant reduction was observed from baseline to post-PCB ($p = 0.57$). Stratified analysis per vessel showed a significant reduction in maxLCBI4mm over 9 months in the left circumflex artery ($n = 7$, $p = 0.02$), while changes in the left anterior descending artery ($n = 4$, $p = 0.25$) and right coronary artery ($n = 3$, $p = 0.50$) were not significant. However, inter-vessel comparisons showed no significant differences in maxLCBI4mm reduction across the different coronary arteries (baseline to post-PCB: $p = 0.99$, baseline to 9 months: $p = 0.67$, post-PCB to 9 months: $p = 0.60$).

Conclusion:

Our findings demonstrate that PCB treatment of LRPs leads to a significant reduction in



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maxLCBI4mm over 9 months, with similar effects across the different coronary arteries. The absence of immediate post-PCB changes suggests a gradual biological response to paclitaxel rather than an immediate lipid modification effect caused by the balloon inflation. This supports the potential of drug-coated balloon therapy in altering plaque composition over time. Future large-scale studies are warranted to confirm these findings, explore predictors of response, and evaluate the clinical implications for long-term cardiovascular risk reduction.

Keywords:

Vulnerable plaque, IVUS-NIRS, Paclitaxel-coated balloon

Figure:

Table 1. Core laboratory-adjudicated imaging outcomes per PCB-treated vessel

	Baseline	Post-DCB	9 months	Absolute change baseline to post-PCB	Baseline to post-PCB p-value ¹	Absolute change baseline to 9M	Baseline to 9M p-value ¹	Absolute change post-PCB to 9M	Post-PCB to 9M p-value ¹
LAD (n=4)	525 [252 to 545]	357 [240 to 617]	328 [77 to 519]	-5 [-234 to 131]	0.88	-118 [-263 to -17,3]	0.25	-113 [-394 to 217]	0.63
RCX (n=7)	422 [356 to 800]	393 [309 to 698]	206 [99 to 345]	-31 [-102 to 36]	0.58	-151 [-430 to -70]	0.02	-187 [-283 to 85]	0.02
RCA (n=3)	332 [115 to 499]	406 [202 to 437]	255 [132 to 352]	-62 [-130 to 0]	1.00	-147 [-200 to 0]	0.50	-85 [-151 to 0]	0.25
Total (n=14)	461 [315 to 536]	400 [286 to 516]	233 [124 to 375]	-35,5 [-109 to 74]	0.57	-139 [-311 to -55,3]	<0.01	-137 [-234 to -62,3]	0.01
p-value ²				0.99		0.67		0.60	

Data are median [IQR]. ¹P-value derived from Wilcoxon signed rank test. ²P-value derived from Kruskal-Wallis test comparing all coronary arteries. LAD: left anterior descending artery, PCB: paclitaxel-coated balloon, RCA: right coronary artery, RCX: ramus circumflexus.



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Abstract 6

Direct Mobilization after Successful Femoral Deployment of an Angio-Seal VIP Post Coronary Angiography or Percutaneous Coronary Intervention: Results of the Move-it Pilot Study

Presenting author: R.L.I. Jonkman

Department: Cardiology

R.L.I. Jonkman (Amsterdam UMC, Amsterdam); E.L.M. Ponsioen (Amsterdam UMC, Amsterdam); B.E.P.M. Claessen (Amsterdam UMC, Amsterdam); N.J. Verouden (Amsterdam UMC, Amsterdam); J.S. Lemkes (Amsterdam UMC, Amsterdam); Y. Appelman (Amsterdam UMC, Amsterdam); T.S.J. Opstal (Amsterdam UMC, Amsterdam); A. Nap (Amsterdam UMC, Amsterdam); P. Knaapen (Amsterdam UMC, Amsterdam); R. Delewi (Amsterdam UMC, Amsterdam); A.W. den Hartog (Amsterdam UMC, Amsterdam)

Purpose:

Routine post-procedural immobilization after transfemoral coronary procedures (TCP) aims to prevent vascular complications but may delay recovery and prolong hospitalization. With vascular closure devices, the necessity of immobilization is questioned. The MOVE-IT pilot study evaluated the safety and feasibility of immediate mobilization after TCP using Angio-Seal VIP– closure device (Terumo Europe N.V., Leuven, Belgium).

Methods:

This prospective, single-center pilot study included 50 consecutive patients undergoing transfemoral coronary angiography or percutaneous coronary intervention (PCI) using 6–8 French sheaths. Patients mobilized immediately after successful Angio-Seal VIP deployment. The primary outcome was a composite endpoint of access-site bleeding (\geq BARC 3), vascular complications, requirement for vascular intervention, and vasovagal reactions. Secondary outcomes included time to mobilization, time to discharge, patient satisfaction, and pain scores. Outcomes were assessed immediately after the procedure, at 1 and 2 hours, and at 30-days.

Results:

Mean age was 68.2 ± 9.1 years; 26% were female and 50% underwent PCI. A 6 Fr sheath was used in 84% of patients, and 44% received 5,000 IU heparin. Most patients were on aspirin (34%) or aspirin with P2Y12 inhibitors (42%). Prior to Angio-Seal VIP deployment, mean arterial blood pressure was 96.8 ± 2.3 mmHg and mean ACT was 243.7 ± 85.7 seconds. Mean time to mobilization was 5.0 ± 2.5 minutes, mean time to discharge was 4.7 ± 1.5 hours. Minor bleeding (BARC 1–2) occurred in 12%; no major bleeding or vascular complications were observed (table 1).

Conclusion:

Immediate mobilization after TCP using Angio-Seal VIP appears safe, feasible, and well tolerated.

Keywords:

Femoral access, Vascular closure device, Immediate mobilization



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Figure:

*N=47

**Acute occlusion, dissection, perforation, pseudo-aneurysm, infection, vascular intervention

Table 1: Study outcomes

Primary endpoints	All patients N = 50 (%)
Bleeding	6 (12)
BARC 1	2 (4)
BARC 2	4 (8)
BARC >2	-
Haematoma's*	23 (49)
Minor <5cm	12 (26)
Major >5cm	11 (23)
Vascular complications**	-
Angioseal deployment failure	-
Vasovagal response	1 (2)



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Abstract 7

Association between Socioeconomic Status and Cardiovascular Outcomes after PCI

Presenting author: S. Janssen

Department: Cardiology

S. Janssen (Zuyderland Medical Centre, Heerlen); S. Janssen (Zuyderland Medical Centre, Heerlen); D.A.M. Peeters (Radboud University Medical Centre, Nijmegen); E.C.I. Woelders (Radboud University Medical Centre, Nijmegen); P.J.C. Winkler (Zuyderland Medical Centre, Heerlen); J.J.P. Luijkx (Zuyderland Medical Centre, Heerlen); W.S. Remkes (VieCuri Medical Centre, Venlo); P. Damman (Radboud University Medical Centre, Nijmegen); S. Rasoul (Zuyderland Medical Centre, Heerlen); R.J.M. van Geuns (Radboud University Medical Centre, Nijmegen); A.W.J. van 't Hof (Maastricht University Medical Centre, Maastricht), on behalf of the ZON-HR investigators

Purpose:

Socioeconomic status (SES) has been associated with cardiovascular outcomes, yet contemporary data from regional PCI cohorts in the Netherlands remain limited. We investigated the association between SES, baseline characteristics, and cardiovascular outcomes in a large registry of patients treated with percutaneous coronary intervention (PCI).

Methods:

Data were obtained from the Southeast Netherlands Heart Registry (ZON-HR), an ongoing, multicentre PCI registry. SES scores were determined by linkage of patients' residential postal code to publicly available data from Statistics Netherlands (CBS) and analysed as a continuous variable. Patients with available SES score and complete 1-year follow-up were included. Associations with baseline characteristics and 1-year outcomes were assessed using logistic regression.

Results:

SES score and complete 1-year follow-up were available for 6,424 patients. Lower SES was associated with higher odds of acute coronary syndrome (OR 1.37, 95% CI 1.07–1.75), obesity (OR 1.80, 95%CI 1.37-2.36), peripheral artery disease (OR 1.66, 95% CI 1.13–2.44), hypertension (OR 1.74, 95% CI 1.35–2.23), diabetes (OR 2.35, 95% CI 1.77–3.13), and active smoking (OR 4.00, 95% CI 2.96–5.39). Regarding 1-year outcomes, lower SES was associated with a higher risk of major adverse cardiac and cerebrovascular events (MACCE) (OR 1.44, 95% CI 1.01-2.04), primarily driven by increased risk of ischemic cerebrovascular accident (iCVA) and cardiovascular mortality. After multivariable adjustment, SES did not remain an independent predictor of MACCE (OR 1.51, 95%CI 0.86-2.65).

Conclusion:

Lower SES was associated with a less favourable cardiovascular risk profile and higher unadjusted rates of MACCE 1 year after PCI.

Keywords:

Socioeconomic status, Percutaneous coronary intervention, Cardiovascular outcomes



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Figure:

Figure 1: Forest plot of odds ratios with 95% confidence intervals for the association between lower socioeconomic status and baseline characteristics, and clinical outcomes 1 year after PCI.

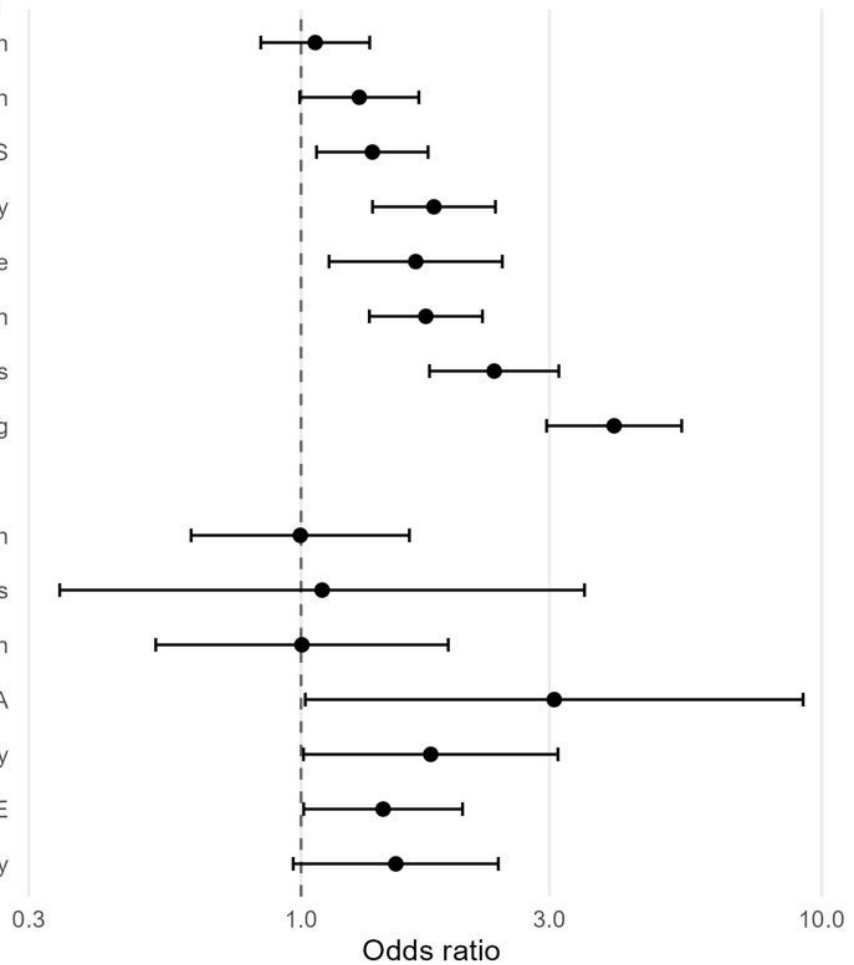
ACS, acute coronary syndrome; iCVA, ischemic cerebrovascular accident; MACCE, major adverse cardiac and cerebrovascular events; PCI, percutaneous coronary intervention.

Baseline characteristics

- Previous revascularisation
- Previous myocardial infarction
- ACS
- Obesity
- Peripheral artery disease
- Hypertension
- Diabetes
- Active smoking

Clinical outcomes

- Unplanned revascularisation
- Stent thrombosis
- Myocardial infarction
- iCVA
- Cardiovascular mortality
- MACCE
- All-cause mortality





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Abstract 8

Current Adoption of ESC Guidelines for Intracoronary Imaging in Complex Percutaneous Coronary Interventions in the Netherlands

Presenting author: F.D. Bosman

Department: Cardiology

F.D. Bosman (Catharina Ziekenhuis, Eindhoven); F.D. Bosman (Catharina Ziekenhuis, Eindhoven); K.A.J. van Beek (Catharina Ziekenhuis, Eindhoven); M.J.C. Timmermans (Nederlandse Hart Registratie, Utrecht); I.J. Oosting (Nederlandse Hart Registratie, Utrecht); B.E. Schölzel (Haaglanden MC, Den Haag); J. Polad (Jeroen Bosch Ziekenhuis, Den Bosch); E.J. Bakker (Maasstad Ziekenhuis, Rotterdam); F. Spano (Meander MC, Amersfoort); M.M. Ewing (Noordwest Ziekenhuisgroep, Alkmaar); J. Plomp (Tergooi MC, Hilversum); M.J. Grundeken (Amsterdam UMC, Amsterdam); K. Teeuwen (Catharina Ziekenhuis, Eindhoven)

Purpose:

Intracoronary imaging-guided percutaneous coronary intervention (PCI), using either intravascular ultrasound (IVUS) or optical coherence tomography (OCT), has demonstrated superiority over angiography alone in improving clinical outcomes in patients with complex coronary artery disease. As a result, the 2024 ESC guidelines upgraded the use of imaging in complex PCI to a Class I, Level A recommendation, explicitly in left main lesions, true bifurcations, and long lesions. The aim of this study was to assess the adoption of the recent guidelines regarding the use of intracoronary imaging in Dutch hospitals during complex PCI.

Methods:

This study included patients from the Netherlands heart registration who underwent a complex PCI between April and September 2025. A complex PCI was defined as the presence of at least one lesion meeting one or more of the following criteria: left main, ostial, in-stent restenosis, true bifurcations, long (stent length ≥ 38 mm), severely calcified (use of calcium modification techniques), and chronic total occlusions (CTO). The primary endpoint was the proportion of intracoronary imaging use, either IVUS or OCT. Secondary endpoints included the proportion of intracoronary imaging use per complex lesion type, as well as variability in its use across centers and operators.

Results:

Of the 5,407 PCI procedures performed in 8 hospitals, 2,412 (44.6%) were classified as complex, with intracoronary imaging applied in 410 (17.0%) of these complex cases. Among the complex lesions, long lesions were the most prevalent (57.4%), followed by ostial lesions (31.1%), true bifurcations (22.2%), left main (15.9%), CTO (12.0%), in-stent restenosis (10.5%), and severely calcified lesions (10.0%). Of the three lesion types explicitly mentioned in the guidelines, intracoronary imaging was most frequently employed in left main lesions (38.5%), followed by true bifurcations (22.2%) and long lesions (16.5%). Among the other lesion types, intracoronary imaging was most frequently applied in severely calcified lesions (30.0%), followed by ostial lesions (21.2%), in-stent restenosis (19.3%), and CTO (11.1%). A strong variation in intracoronary imaging use was observed across centers, ranging from 7.9% to 40.1%, with a median of 11.6%.

Conclusion:

Intracoronary imaging was used in a minority of complex PCI with considerable variation across centers and lesion types. A dedicated project to implement the current guidelines



ABSTRACTS
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could help increase the adoption of intracoronary imaging and improve outcomes for patients undergoing complex PCI.

Keywords:

Intracoronary imaging, Complex PCI,